



HELPFILE

PUT YOUR QUESTIONS TO OUR TECHNICAL EXPERTS

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HELPFILE

Paul Mullen answers your computing queries

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When writing to Helpfile, please try to give full details of your problem. We also require both daytime and evening phone numbers in case we need more information. Although the policy of Computer Shopper is not to publish readers' email addresses, we include them in Helpfile so that other readers with experience of similar problems can share their solution (please also cc any comments to helpfile@computershopper.co.uk). If you would prefer not to have your email address published, please say so.

PAUL MULLEN

Paul has been a transport demand forecaster, economic adviser to the government and IT consultant to many big companies, and has been using and writing software for personal computers since 1978

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INTERNET BROWSERS

MOZILLA FIREFOX PROBLEMS

Q I am using Mozilla Firefox as it was recommended by *Shopper*. However, I wonder why you think so highly of it – it keeps causing me problems. For instance, if I go to www.braddocksbaits.co.uk and go to Archie's Diary, 2005, June and press Continue, the pictures are superimposed over the text so it cannot be read. The black words and pictures seem to be higher in the page than they should be. In Internet Explorer the layout is perfect.

What setting do I adjust in Firefox to get the layout correct, as the website designer intended? Firefox's built-in help does not seem to cater for such a fault.

John Kinsman, johnh.kinsman@virgin.net

A This page does look messy in Firefox. However, it's not a bug in Firefox but the result of bugs in Internet Explorer.

Internet Explorer is quite buggy and does not display certain text elements in the correct positions. Because it is so common, many web page designers have built their sites with this in mind, correcting the positioning of these style elements.

Internet Explorer also ignores many errors in HTML code, allowing incorrect code to produce pages that still work. Unfortunately, the Firefox, Safari or Oasis browsers don't contain the same bugs and closely follow the international standards set by W3C. The corrections that the web page designer made so his site will look OK in Internet Explorer cause it to look odd in other browsers.

Website designers should stop using the style elements that don't display properly in Internet Explorer. Alternatively they can add special code to detect this browser and adjust the styles just for Internet Explorer users. If enough users complain, designers will fix their websites to obey the correct



HTML. As more and more users choose to use Firefox, Oasis or Safari rather than Internet Explorer, so web designers must adjust their pages to be more compatible. More information is available at www.computergripes.com/firefoxsites.html.

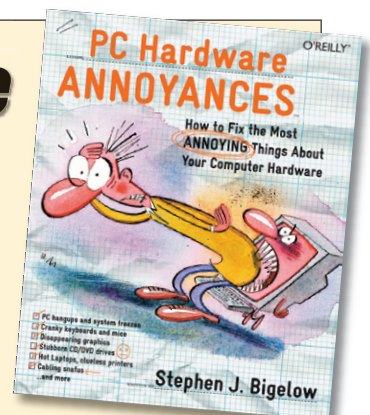
For now, though, the answer is simple. Some web pages just need to be viewed in Internet Explorer. If you want to use mainly Firefox, you can install an add-on that calls Internet Explorer from within Firefox when necessary. Go to Firefox's Extensions page and install IE View. This small 22KB extension adds a View Page in Internet Explorer option to Firefox's context menus, so the choice is available at your fingertips.

When you find a page that works only in Internet Explorer, go to Firefox's Tools menu and choose Always view this page in IE. It will open IE for you whenever you visit that page. You can then still benefit from the greater speed and safety of Firefox when viewing other sites.



PC Hardware Annoyances

If you send our star letter, you'll receive a prize. This month's winner gets a copy of O'Reilly's *PC Hardware Annoyances*, which will help you fix any number of hardware problems. If you don't want to spend the rest of your life troubleshooting, make sure you keep this next to your PC along with the latest copy of *Computer Shopper*. Your PC woes will disappear.





INTERNET SECURITY



HOW DO I GET RID OF THIS UNWANTED FILE?

Q I run Windows XP with Service Pack 2 (SP2). I am concerned because my McAfee virus protection has identified a program called yioig.exe that is requesting access to the internet. I do not know what this program is and I cannot get rid of it. It resides in the Windows directory.

Can you tell me what it is and how I can delete it? When I try to remove it, Windows says it cannot delete it, saying that "the file is in use by another program". But this is not true as no other programs are open.

John Brown, f-j-brown@btconnect.com

A Your letter illustrates how important it is for every computer to have some kind of firewall application that checks which programs are accessing the internet. The standard Windows SP2 firewall does not do this, nor do standard anti-virus programs. However, most anti-virus developers produce an internet security package that includes such a firewall. The excellent basic version of ZoneAlarm also offers program control for free.

The program name yioig.exe isn't familiar. It sounds like one of those pests that installs itself using randomly generated filenames. However, since it is in the Windows folder, which should

only be used by Windows components, it is almost certainly a Trojan, and probably installed by some form of spyware.

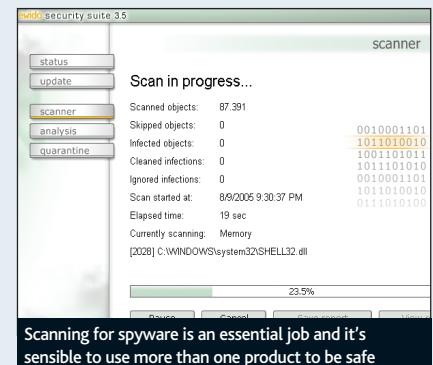
You can't delete it because the Trojan itself is running and keeping this file open. This is a common problem when deleting Trojans and spyware. Many anti-virus programs find the Trojans and attempt to delete them but can't. You usually need to run special anti-spyware programs. Even then, some of these Trojans are hard to remove.

It seems that the anti-virus portion of McAfee's software is not detecting this Trojan. Many anti-virus programs have a poor record at detecting Trojans. You should restart your computer in Safe Mode with networking. Do this by pressing F8 repeatedly during startup, before the first Windows screen appears. Then try a full anti-virus scan. If McAfee still does not detect this program as a Trojan, try the free Trend online scanner at www.antivirus.com or F-Secure's online scanner at www.f-secure.com.

I suspect this program is just one component of a spyware infection. To remove it completely, you will have to use an anti-spyware program, in fact probably more than one, as each one finds pests the others miss. Microsoft's AntiSpyware (Beta), which is free until December 2005, does a decent job of removing spyware. However, it has

difficulty removing some of the worst pests. To deal with really stubborn spyware, try a relatively new program called Ewido.

Ewido uses advanced techniques, scans quickly and has been successful in detecting and removing stubborn Trojans and spyware where other programs have failed. You can download it from www.ewido.net. There is a free basic version that also functions as a 14-day trial of the premium version. The free download should remove this pest but if you want to keep your system clean, you'll find the premium version is well worth \$30 (around £17).



HARD DISK DELETING FILES

WILL A RECOVERY DISC SECURELY ERASE MY DATA?

Q I'm thinking of buying a new computer and I would like to sell my old one, but I'm concerned about all my personal data getting into the wrong hands. I have a system recovery disc that claims it has the ability to recover the computer to its out-of-the-box state. Would this be enough to clear all the personal data off my old computer so I can sell it with peace of mind?

Graham, u2ok@grahams.fsnet.co.uk

A System recovery discs vary, but most write only to the areas of the hard disk to which they need to copy the new files. This means that data in other areas of the drive remains but can't be accessed easily. The file system no longer contains any links to these deleted files.

However, that wouldn't prevent a malicious or curious user from searching the unused sectors of the drive for interesting information. You should run System Restore and download the WinHex program (www.winhex.com). This lets you initialise,

or wipe, unused clusters and slack space at the end of partly used clusters. If the old PC used the so-called new technology file system (NTFS), available with Windows NT, 2000 and XP, you also need to wipe unused Master File table entries, as NTFS stores short data files in the MFT.

There are plenty of other disk-wipe programs out there. You can also get a low-level disk utility from the manufacturer of your hard disk that will write zeros to the entire drive, after which you will need to run the System Restore disc.

INTERNET SECURITY

REMOVING A SUSPECT TEXT FILE

Q I have found a text file on my system and I do not know if it is normal or if it could be some sort of spyware. Here is a copy of the text file as it appears on my PC:

WEB installer path C:\WINDOWS\Downloaded Program Files\WEBInstaller.dll Success copy
lsp.dll Success copy SahAgent.exe Success
copy xmlparse.dll Success copy xmltok.dll
Success copy sporder.dll
(plus many more lines)

Can I delete this file, as it did not show up in the search for spyware?

Alan Palmer, cavalry11@btopenworld.com

A This log file was created during the installation of some spyware called Webhancer, also known as SAHAgent. You don't need it, but the log file is not harmful. The first line shows the location of the actual installer file, which must have been installed by an ActiveX control on a website you visited. It lists many of the files that were installed.

Hopefully, if you have run good anti-spyware software recently, these have all been removed. However, some of them – sporder.dll, for example – have the same name as Microsoft Windows files. This software replaces many essential components of the Windows Winsock layered service provider (LSP) stack. After removing infected software, you'll probably be unable to connect to the internet until you repair the Winsock LSP stack using a tool such as WinsockFix XP. This is available from <http://tntmax.com> or www.majorgeeks.com/download4372.html.

To avoid re-infection, install all the available Windows security patches or switch to a browser such as Mozilla Firefox, which won't allow these ActiveX controls to run.



STORAGE DISK CLEANING

DISK CLEANUP HANGS

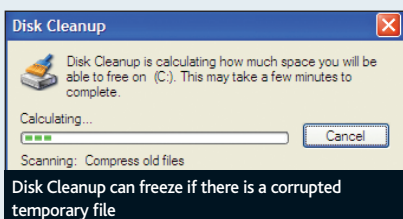
Q I use Windows XP but I'm unable to run Disk Cleanup. When I start Disk Cleanup from Programs, Accessories, System Tools it shows three green bars on the progress bar, but that's it. It does nothing else, even after two hours.
Dave Kane, kaneatcapel@aol.com

A It is quite common for Disk Cleanup to hang like this. A common cause of freezing is a corrupted temporary file. Although this won't prevent you deleting it, the Cleanup program gets confused trying to calculate the space that would be saved. Try opening Control Panel and Internet Options and, under Temporary Internet Files, click Delete Files. The corrupted file could be in a user's temp folder. This is trickier to access, as each user profile under Documents and Settings has a temp folder within the hidden folder Local Settings. To access the Temp folder for the current user click Start, Run, type %temp% and click OK. This should bring up a window with your temporary files. Press Ctrl-A to select them and right-click to Delete the selected items.

A second possible cause is Disk Cleanup's feature that allows you to compress old files to save disk space. When enabled, this feature causes Disk Cleanup to search the disk for rarely used files to compress. This can cause the program to hang while you see the Scanning: Compress Old Files message. To fix this you need to use the Registry Editor, so you should create a Restore Point first. Then click Start, Run, type Regedit and click OK. Click the + signs to navigate to HKey_Local_Machine, Software, Microsoft, Windows, CurrentVersion, Explorer, VolumeCaches. Under this, you will find a Compress old files key. Right-click on this key and choose Export, which makes a backup. Next, delete the Compress old files key; this should cure the problem by disabling the search for old files to compress.

Old files are files that have not been accessed for over 50 days. Searching for these takes a long time. You'll find Disk Cleanup is much quicker without it. If you do this to speed up Disk Cleanup and later decide you'd like to compress old files, find the exported .reg file and double-click it to restore it to the Registry.

If Disk Cleanup still has problems, there's probably further damage to the NTFS or even the hard disk. Back up important data and run Chkdsk to see if this can find the problem.



HARDWARE ERROR CODES

CONFUSING ERROR CODE

Q I built a new system recently, adding the graphics card, keyboard, mouse and DVD writer from my old PC. However, I have received the error code, "Stop 0x0000009c (0x00000004, 0x80545ff0, 0xb2000000, 0x00070f0f)". I tried the Memory Diagnostic program and my system passed. I had a similar problem with my old PC. I received error codes such as the one above but I'm not sure if it was the same code. Is the problem with the components transferred from my old PC?
David Platt, plattyd100@hotmail.com

A Stop error codes are referred to as bug check codes or bccode in Microsoft documentation. There is an online reference to these codes at the Microsoft Developers Network site. It has a very long URL, but you can go to <http://msdn.microsoft.com> and search for Bug Check Codes to find the page.

Unfortunately, the Developers Network guide was written for device driver developers, so

the information tends to be very technical. Stop 0x9c means Machine Check Exception; the rest of the information given is of use only to hardware engineers. A little more advice is provided in a Microsoft Knowledge Base article at <http://support.microsoft.com/kb329284>.

A machine check is like a memory parity error, or at least it was when RAM used a parity bit. Modern memory modules do not use parity, so the advice to test memory is not particularly relevant.

However, there is a more useful list at www.aumha.org/win5/mbestop.htm. This site suggests that in most cases Stop 0x9c is caused by faulty hardware, overheating or overclocking. It can also be due to a failing processor, motherboard or even power supply. Then again, it could just be the result of incorrect BIOS settings. Reset your motherboard's CMOS jumper and, if necessary, reset your BIOS settings to their default values.

Faulty device drivers can also cause problems. Device drivers often initialise hardware settings and invalid settings can cause the hardware to crash.

MOTHERBOARD MEMORY CHECK

AMI BIOS CHECKING NVRAM

Q I have an Asus P4V8X-X motherboard with an AMI BIOS. This has started checking the NVRAM for about two or three minutes before completing the bootup. I can't see anything in the BIOS menu to stop this from happening, or anything on the AMI site to help. It's driving me crazy.
Peter Walker, judogi27@ntlworld.com

A Check your BIOS setup again for the Reset Configuration Data option. The manual refers to extended system configuration data (ESCD); this data is held in a non-volatile RAM chip and is what the BIOS is referring to when it says, "Checking NVRAM". I think this data is corrupted and needs to be reset.

Most BIOS setup programs hide this option, sometimes on an Advanced page, sometimes

under Integrated Peripherals or PCI Configuration; it does not clearly fit into any one of these categories. Your BIOS puts it on the Boot Options page. Change the value to Yes and choose to save changes and reboot. It will reset the contents of the NVRAM and change to No after the reboot.

On systems such as Dell PCs built before 1998, the NVRAM reset option isn't a BIOS setup option but a jumper on the motherboard, or requires you to hold down certain keys when powering up the PC. On Dell 2200, 4300, 4500S, 8100 and 8200 systems, enter the BIOS setup, press Caps Lock, Scroll Lock and Num Lock to light up all three lights on the keyboard and press Alt-E.

Newer Dell PCs have a reset option on the Advanced page of the BIOS. If you have no BIOS setup option, visit <http://support.dell.com> and search for support note number 1023538.

FEEDBACK INTERNET

WIRELESS OPTION FOR XBOX

Q I have just read James Rochfort's letter about adding wireless to an Xbox (*Helpfile, Shopper September 2005*). I use a Linksys WGA54G third-party wireless game adaptor. I got this from eBay and it is now £51. You need to set it up on a PC if you have wired equivalent privacy (WEP) enabled, because you can't use the Xbox to select the necessary options. However, I have played Halo 2 online with no problems.
Chris Kember, chris.kember@ntlworld.com

A The Linksys WGA54G attaches to devices such as PCs, Xboxes, GameCubes and anything else that has an Ethernet network port. It acts like a wireless network card but, as Chris points out, you may need to set it up using a Windows PC if your network is secured. Once set up, it can be attached to the Xbox and provide a wireless connection. It supports 802.11b and 802.11g wireless standards, permitting speeds of up to 11Mbit/s and 56Mbit/s respectively.



WINDOWS COMPATIBILITY

CAN'T ACCESS WINDOWS XP COMPATIBILITY MODE

Q I used a Windows 95 system for many years and created around 2,000 drawings on a package from Autodesk called AutoSketch. I have just retired, but I would like to maintain access to these drawings.

I bought a new system a year ago, together with a standalone copy of Windows XP Professional Edition. I was delighted to find it ran my old AutoSketch 2.1 program in Compatibility mode. I then installed Service Pack 2 (SP2), only for Compatibility mode to fail, together with my ability to access the drawings.

I tried resetting Compatibility mode and Windows returned the message, "C:\Windows\System32\Autoexec.NT cannot run this application". I tried re-invoking Compatibility mode, but to no avail. A professional acquaintance advised me that SP2 had caused the damage, though I also had a nasty computer virus that my son cured after five hours of hard work. Norton AntiVirus and NoAdware seem to keep it clean now, but the Compatibility feature is still not working.

I bought a new copy of AutoCAD LT and have tried transferring the files, so far without success. I find it difficult at my age to learn a new and fairly complicated drawing package. I feel cheated, because Windows XP Professional Edition met my needs but an upgrade destroyed it. I have contacted Microsoft via its website but have not had a reply. Can you help me regain my Compatibility mode?

Colin Walker, colin@collywobbles.f2s.com

A The changes in Windows XP SP2 could affect compatibility with certain software, but this is not your problem. The Autoexec.NT error is the clue. When you are running old DOS or 16-bit Windows applications, Windows XP runs copies of the files from the older operating system in a virtual box called the NT Virtual DOS Machine (NTVDM). Technical

details are described in Microsoft's article at <http://support.microsoft.com/kb/314106>.

The files it needs are Autoexec.NT (replacing Autoexec.bat), Config.NT (replacing Config.sys), Ntios.sys, Ntdos.sys, Ntvdm.exe, Ntvdm.dll, Redir.exe and Command.com. There are different versions of the nt*.sys files with numbers (404, 411, 412, 804) in their names, representing different versions of Windows. These are used by the Program Compatibility Wizard and should be found in the Windows System32 folder, but not in any other folder referred to in the system's path variable. You are also likely to need other driver files mentioned in Config.NT, such as himem.sys.

The quick way to test the NTVDM is to click Start, Run and type Command.com. Click OK, and a DOS command prompt should open. Although this looks similar to the usual Windows XP command prompt, called cmd.exe, it is very different internally. If Command.com does not run, the NTVDM files are messed up.

It is common for certain virus or spyware infections to delete or corrupt Autoexec.NT. They seem to be doing it to make it harder for you to install anti-virus programs. Program installers use a 16-bit version of InstallShield that requires these files. If that is missing, you see this confusing message: "16 bit Windows Subsystem - C:\WINDOWS\SYSTEM32\AUTOEXEC.NT. The system file is not suitable for running MS-DOS and Microsoft Windows applications. Choose Close to terminate the application."

Online reports claim that Autoexec.NT is deleted during the installation of SP2, but that has not been our experience with every system. Autoexec.NT does not disappear when SP2 is loaded on a clean system, only when certain spyware is present. Unfortunately, since the affected systems we looked at had a variety of spyware present, we have not yet been able to determine which spyware is responsible.

Fortunately, it is easy to replace Autoexec.NT. Windows keeps a spare copy of this file in the Windows\Repair folder. Open a command prompt

by clicking Start, Run, and entering cmd. Then type the following commands:

```
cd C:\Windows\System32
copy C:\Windows\Repair\autoexec.nt
```

When it asks if you want to overwrite a file, say you do. If config.NT is missing, copy this file too. If you are missing command.com, himem.sys or any of the nt*.sys files, you will have to extract these from the Windows CD using the expand command below. If your CD drive is not D:, substitute the correct drive letter:

```
expand d:\i386\command.co_ c:
\windows\system32\command.com
expand d:\i386\himem.sy_ c:\windows\
system32\himem.sys
```

To avoid these files being deleted again in the future, you may need to set the Autoexec.NT and Config.NT files as read-only. Either right-click on the file in Windows Explorer, select Properties and click on the read-only box or, alternatively, you can do it from the command prompt using these commands:

```
cd \Windows\System32
attrib +r *.NT
```

Try the Program Compatibility Wizard again and AutoSketch should run correctly.

There are newer versions of AutoSketch available, the latest being R9. R8 is listed as being compatible with Windows XP. However, UK prices seem much higher than US prices. At Amazon UK AutoSketch R9 costs £160, but at Amazon.com the US version is listed for just \$120 (around £68). While it's true that the UK price has VAT included, someone still seems to have doubled the price. If you are happy with your old version, you shouldn't upgrade. Some users have complained about the changed user interface and file formats, which make it hard to switch versions.

STORAGE DVD WRITING

DVD WRITER WON'T WRITE SOME DISCS AT RATED SPEED

Q I have an LG DVD-RAM recorder, the GSA-4082B. I use this regularly to burn DVDs. When buying recordable DVDs, I buy +/-R discs in spindle packs of 25. With most of the media I have bought, my drive has been able to write to discs at their top-rated speed without any problems.

However, when I use DVD-R discs manufactured by Datawrite, my drive does not recognise them to be as fast as they are rated. More specifically, they seem to write at half their rated speed. An 8X disc writes at 4X, 4X at 2X and so on. Moreover, my drive gives the option of only a single speed with these discs, when lower ones should be available.

Writing DVDs at slow speeds feels very much like watching paint dry. I don't think it is my drive's fault, because other brands of -R discs write at 8X with no problems. Also, +R discs from Datawrite can be written at their full speed. Do you know why I have this problem with the discs, and is there anything I can do to stop it from happening?

Jonathan Skelton, joe.skelton1@ntlworld.com

A It is common for a DVD writer to fail to write some brands of blank media at the full rated speed. The media has to be recognised by the drive's firmware. In addition, 8X DVD-R was still relatively new when your drive

came out, so some brands may not be on the drive's compatible media list. A firmware update may help. There is an update available at <http://gb.lgservice.com>. Click on the Device Drivers icon, navigate through the DVD-ROM (Writer) link and check the list. The firmware update is version .A208 and includes improved writing performance. Read the instructions carefully before installing.

Even then, certain brands of media are not fully compatible with certain drives, so you either have to go by trial and error or stick to more expensive top-quality brands. In addition, Datawrite doesn't make its own discs; it puts its name on discs from several different manufacturers. Some of its media may work fine.



FACTFILE

CORRUPTED HARD DISK

Your hard disk is dead in the water, but you might be able to get your data back, as we explain

Q I have a corrupted hard disk, possibly as a result of a virus but probably because of bad memory.

After numerous crashes and attempted restarts and reinstalls, my Windows setup software told me the hard disk was empty but needed reformatting. I have removed the offending hard disk and reinstalled Windows on a new one. However, I would like to recover the data, especially my Outlook email, from the old disk.

Do I have any chance of retrieving my email and data? If so, will I place my computer and my new hard disk at risk if I connect the corrupted disk to my PC?

Harry Smith, harry@motown.co.uk

A If you suspect bad memory has caused the hard disk problems, as it might well have, you need to replace it as soon as possible.

Hopefully the hard disk is suffering from corruption of the Master Boot Record or the Boot Sector, both of which can be repaired relatively simply. When Windows thinks the disk is empty, it is usually because the partition table is missing. This table is part of the Master Boot Record and lists the type of partitions and the starting sector and length of each partition. The starting sector listed in the partition table will contain a boot sector, which includes a table of information about the partition, such as the cluster size and where to find the start of the Master File Table.

HARD TO HANDLE

Connecting up your old hard disk – as a slave drive, or to the secondary IDE connector – should be safe. Windows may ask you whether you want to format the new disk; say

you don't. Any virus on the old disk can't infect the system until you run programs off that disk, so you can do a virus scan before accessing any data on the disk.

Before scanning for viruses, you need to get the disk recognised. There are some automated tools that claim to fix such problems, but I have seen them make serious mistakes and create situations far harder to sort out. The best tool is a program called WinHex, a trial version of which can be downloaded from www.winhex.com.

Install and run WinHex, then press F9 to display a list of disk drives. Open the second physical drive called HD1. If you are unfamiliar with hard disk structures, open the first hard disk (HD0) too. This will give you an idea of what each sector should look like. Take a look at sector 0 on HD0 to see what a Master Boot Record looks like. You should see a group of hex characters and some clear text messages such as "Error loading operating System". The last two bytes contain the signature 55 AA.

ZERO WORSHIP

Look at HD1, the second hard disk. Does sector 0 contain something similar, or is it blank or overwritten with garbage data? Memory corruption can cause the operating system to write data to sector 0 when it should be writing to a different part of the disk.

If sector 0 on the bad disk appears to be a valid partition table, press Ctrl-F12 and choose the Master Boot Record template to view partition entries. The partition table can contain up to four entries. There are many different types of partition, but most Windows XP systems use NTFS, a file system that uses partition type 07. For now you can ignore the start and end cylinders, heads and sectors,

which are mainly historical relics. The crucial data is the starting sector – the number of sectors preceding the partition – and the length of the partition in sectors.

In most cases there is just one partition on the disk and this will start at sector 63, the boot sector. An NTFS partition always has NTFS at position 3 in the boot sector. You will also see some text messages such as "NTLDR is missing". It will end with bytes 55 AA. If you don't find this sector at sector 63 and you are certain your hard disk was formatted with NTFS, not FAT32, ask WinHex to search the disk for sectors with NTFS at offset 3.

BOOT CLUB

For an NTFS partition there will always be two copies of the boot sector: one at the start and one at the end of the partition. The boot sector will state the number of sectors in the partition. This is always one fewer than the number stated in the partition table, as it does not include the copy of the boot sector. In WinHex press Ctrl-F12 and use the NTFS Boot sector template to view the boot sector information.

If the starting boot sector is missing, WinHex can be used to copy the boot sector from the end of the partition. If the Master Boot Record is missing, copy the one from your new working disk, HD0. Press Ctrl-F12 and load the template to edit the values for the partition table. In most cases you just need to enter the number of sectors in the partition.

Once you have corrected any problems, reboot to give Windows a chance to find the disk. If these steps don't give you an accessible disk, it's probably time to consult an expert or run some data-recovery software that reads files off a damaged partition.

4E 54 46 53 20 20 20 00 02 08 00 00	00 00 F8 00 00 3F 00 FF 00 3F 00 00 00	00 80 00 00 00 3F FF 7D 03 00 00 00 00	00 00 00 00 00 10 00 00 00 00 00 00
00 01 00 00 00 95 DD 28 1C 11 29 1C 26	00 00 00 00 00 00 00 00 00 00 00 00	00 FA 33 C0 8E D0 BC 00 7C FB B8 C0 07	16 00 B8 00 0D 8E C0 33 DB C6 06 0E 00
00 68 00 0D 68 6A 02 CB 8A 16 24 00 B4	73 05 B9 FF FF 8A F1 66 0F B6 C6 40 66	00 E2 3F FF E2 86 CD C0 ED 06 41 66 0F	F7 E1 66 A3 20 00 C3 B4 41 B8 AA 55 8A
CD 13 72 0F 81 FB 55 AA 75 09 F6 C1 01	06 14 00 C3 66 06 1E 06 66 A1 10 00 66	00 66 3B 06 20 00 0F 82 3A 00 1E 66 6A	06 53 66 88 10 00 01 00 80 3E 14 00 00
00 E0 B3 FF 80 3E 14 00 00 0F 84 61 00	16 24 00 16 1F 8B F4 CD 13 66 58 5B 07	58 1F E2 BD 66 33 D2 66 0F B7 0E 18 00	FE C2 8A CA 66 8B D0 66 C1 EA 10 F7 36
06 8A 16 24 00 8A E8 C0 E4 06 0A CC B8	13 0F 82 19 00 8C C0 05 20 8E C0 66	00 FF 0E 0E 00 0F 05 0F FF 07 1F 66 61	F1 E8 09 00 A0 FB 01 E8 03 00 FB EB FE
F0 AC 3C 00 74 09 B4 0E BB 07 00 CD 10	0D 0A 41 20 64 69 73 6B 20 72 65 61 64	72 6F 72 20 6F 63 63 75 72 72 65 64 00	54 4C 44 52 20 69 73 20 6D 69 73 73 69
0D 4E 54 4C 44 52 20 69 73 20 63 6F	65 73 73 65 64 00 0A 50 72 65 73 73	72 6C 2B 41 6C 74 2B 44 65 6C 20 73 6F	73 74 61 72 74 0D 0A 50 00 00 00 00 00
00 00 00 00 00 83 A0 B3 C9 00 00 55 AA			

Each Boot Sector Template shows the total sectors. This should be a figure one less than in the MBR

Offset	Title	Value
0	Master boot loader code	33 C0 8E D0 BC 00 7C FB 50 07 50 1F FC BE 1B 7
Partition Table Entry #1		
18E	00 = active partition	80
18F	Start head	1
1C0	Start sector	1
1C0	Start cylinder	1
1C2	Partition type indicator (hex)	07
1C3	End head	254
1C4	End sector	63
1C4	End cylinder	1023
1C6	Sectors preceding partition 1	63
1CA	Sectors in partition 1	58588932
Partition Table Entry #2		
1CE	00 = active partition	00
1CF	Start head	0
1D0	Start sector	0
1D0	Start cylinder	1023
1D2	Partition type indicator (hex)	0C
1D3	End head	254
1D4	End sector	63
1D4	End cylinder	1023
1D6	Sectors preceding partition 2	5858905
1DA	Sectors in partition 2	19647495

A valid boot sector will contain some clear text messages and end with the signature 55 AA

Offset	Title	Value
6FBFEFC00	JMP instruction	EB 52 90
6FBFEFC03	SystemID	NTFS
6FBFEFC08	Bytes per sector	512
6FBFEFC0D	Sectors per cluster	8
6FBFEFC0E	Reserved sectors	0
6FBFEFC10	(always zero)	00 00 00
6FBFEFC13	(unused)	00 00
6FBFEFC15	Media descriptor	F8
6FBFEFC16	(unused)	00 00
6FBFEFC18	Sectors per track	63
6FBFEFC1A	Heads	255
6FBFEFC1C	Hidden Sectors	63
6FBFEFC20	(unused)	00 00 00 00
6FBFEFC24	(always 80 00 80 00)	80 00 80 00
6FBFEFC28	Total sectors	58588931
6FBFEFC30	Start CH SMFT	786432
6FBFEFC38	Start CH SMFTMir	15
6FBFEFC40	Clust per MFT rec	246
6FBFEFC44	Clust per index block	1
6FBFEFC48	32-bit serial number (hex)	95 DD 28 1C
6FBFEFC4C	32-bit SN (hex, reversed)	11 29 1C 28
6FBFEFC48	64-bit serial number (hex)	95 DD 28 1C 11 29 1C 28
6FBFEFC50	Checksum	0
6FBFEFCFE	Signature (55 AA)	55 AA

This shows the Master Boot Record (MBR) partition information. Type 07 is NTFS, type 0C is FAT32



MEDIA PLAYER SOUND

NO SOUND AFTER UPGRADING TO WINDOWS XP

Q Having upgraded to Windows XP Home Edition, I now have no sound. When I attempt to run Windows Media Player I am told, "Windows Media Player cannot play the file because there is a problem with your sound device. There may not be a sound device installed on your computer, it may be in use by another program, or it may not be functioning properly."

Also, when I click Device Manager and Multimedia Audio Controller Properties, the dialog box states, "The Drivers for this device are not installed (Code 28)". Everything was OK with Windows Me. What could be wrong?
Dennis Williams, dragoncymru1@supanet.com

A You need the right driver for your sound card. Every hardware device needs a driver to run properly under Windows XP. Some devices, such as keyboards, are all so similar that one generic driver works. In other cases, such as with sound cards or built-in sound

chips on motherboards, the driver has to be written for the specific audio chip.

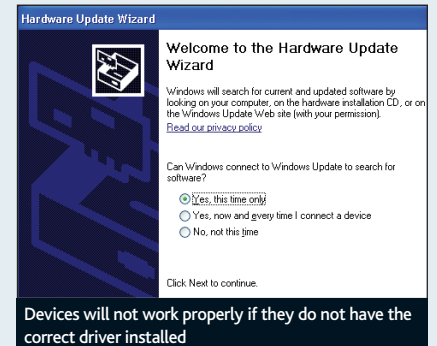
Usually Windows XP does a great job of identifying the device and finding the right driver. But in some cases it makes mistakes and chooses an unsuitable driver, usually one that was written for an earlier release of Windows. This is because the driver writers were careless when creating the information (INF) file that Windows uses to select the right driver. Drivers written for Windows 98 or Me generally won't work for Windows XP.

Try clicking Update Driver. Make sure you have an internet connection available. When it asks if it can search on Windows Update, allow it to do so. This will usually give the best driver, though I have seen cases where Windows gets stuck constantly trying to choose the same incorrect driver.

If Device Manager has some kind of driver installed for a Multimedia Audio Controller, it has probably identified the device correctly. You could search your PC manufacturer's website or the card manufacturer's site for the latest Windows

XP driver. If the sound is built on to your motherboard, you could look on the motherboard manufacturer's website.

Once you find the right driver, download it to a folder on your hard disk. Select Update Driver, click Install from a list or specific location, then Don't Search, I will choose the driver to install and find the folder where you downloaded the driver.



WINDOWS FILE SYSTEMS

LOST DEVICE FILE

Q Our PC is crashing and stalling more frequently than it used to. During one such episode, it seems a file was deleted. Now when we turn on the computer, it says it cannot find the device file needed to run Windows or a Windows application. It says that the System.ini file refers to a device file, but the device file no longer exists. It is called C:\progra~1\SYMANTEC\SYSEVNT.386. We have to press a key to continue startup.

This loss has affected lots of our other files as well. Do you know why this has happened, and how we can replace the device file? Also, is there any danger of us losing any stored information, such as our photos, from the computer?

Allan Traynor, via email

A At some time your computer has crashed or been turned off when it was writing to the hard disk and this has probably corrupted at least one directory. You may have lost access to a whole group of files in a directory or perhaps several directories.

If this has happened once, it could happen again. Programs can be reinstalled, but next time you might lose data files, which would be harder to replace. You need to track down the cause of these crashes or replace the computer. It probably goes without saying that it's essential that you perform a backup.

The error message you mention refers to Program Files\Symantec\sysevt.386, which is a driver used by many of Symantec's Norton applications. Uninstall and then reinstall any Symantec application such as Norton AntiVirus to fix this. The other missing file errors can best be fixed by reinstalling Windows and your applications.

MP3 PLAYER FILE STORAGE

HOW SHOULD I FORMAT MY IPOD?

Q I have a 60GB colour Apple iPod. My computer is running Windows XP, so when I set up the iPod to run with my PC the iPod's hard disk was formatted using the FAT32 file system. I intend to use my iPod as a portable hard disk drive as well as for playing music. Since FAT32 restricts the file size to a maximum of 4GB, I wanted to reformat it as NTFS. However, Apple's website informed me that NTFS-formatted iPods will not play music.

If possible, how can I partition my iPod's hard disk so it contains an NTFS-formatted volume of approximately 15GB for general disk use, and a 30GB FAT32 volume for storing the iPod's settings and music that will be played on the iPod? I would prefer not to have to buy an expensive partition managing program. I have tried using Paragon Partition

Manager, supplied on the cover disc with *Shopper* September 2005, but with no luck.
Dominic Gillespie, dgspitfire@aol.com

A You have misunderstood Apple's support note number 60957, which can be found at <http://docs.info.apple.com/article.html?artnum=60957>. It is not a case of FAT32 v NTFS. The problem is down to the security measures built into iTunes to prevent you paying for music once and copying it all over the place. For this reason, you can't just copy an MP3 file to your iPod using Windows Explorer and play it.

To play music, you have to use iTunes to download it to your iPod. Though the file is stored somewhere on the iPod, you can't see it as a disk file when using your iPod as an external hard disk.

To play music, the iPod's hard disk has to be formatted using the iPod Updater software. This

► It's currently not possible to store files larger than 4GB on an iPod



puts more than just a FAT32 file system on the iPod's hard disk. If you try to format the iPod with any other utility, even if you partitioned it as FAT32, it won't work as an iPod.

Even the latest versions of OS X are unable to write to an NTFS-formatted drive. Until Apple fixes this, I doubt that it will add an NTFS option to the iPod. However, the only serious limitations of FAT32 is the 4GB file limit and a partition size limit of 32GB. Unfortunately, you want to store files larger than 4GB and, at the moment, that's just not possible. ☹